



General

Guideline Title

Ultrasonographic cervical length assessment in predicting preterm birth in singleton pregnancies.

Bibliographic Source(s)

Lim K, Butt K, Crane JM. Ultrasonographic cervical length assessment in predicting preterm birth in singleton pregnancies. J Obstet Gynaecol Can. 2011 May;33(5):486-99. [141 references] [PubMed](#)

Guideline Status

This is the current release of the guideline.

Recommendations

Major Recommendations

The quality of evidence (I-III) and classification of recommendations (A-L) are defined at the end of the "Major Recommendations."

Comparison of Transvaginal, Transabdominal, and Transperineal Ultrasonographic Cervical Length Assessment

Recommendations

1. Transabdominal ultrasonography should not be used for cervical length assessment to predict preterm birth. (II-2D)
2. Transvaginal ultrasonography is the preferred route for cervical assessment to identify women at increased risk of spontaneous preterm birth and may be offered to women at increased risk of preterm birth. (II-2B)
3. Transperineal ultrasonography may be offered to women at increased risk of preterm birth if transvaginal ultrasonography is either unacceptable or unavailable. (II-2B)

Cervical Change in Women Who Deliver Preterm

Summary Statement

Cervical length in the general obstetrical population is relatively stable over the first 2 trimesters. The natural history of cervical length change may be useful in identifying women at increased risk of spontaneous preterm birth. Because there may be different patterns or a delay in cervical length shortening, repeat assessment of cervical length may be useful. (II-2)

Frequency of Cervical Length Measurement

Summary Statement

There is no consensus on the optimal timing or frequency of serial evaluations of cervical length. If repeat measurements are performed, they should be done at suitable intervals to minimize the likelihood of observation error. (II-2)

Transvaginal Sonographic Cervical Length Assessment in Asymptomatic Women at Low Risk

Recommendation

4. Because of poor positive predictive values and sensitivities and lack of proven effective interventions, routine transvaginal cervical length assessment is not recommended in women at low risk. (II-2E)

Transvaginal Sonographic Cervical Length Assessment in Asymptomatic Women with a History of Spontaneous Preterm Birth

Summary Statement

Transvaginal sonography can be used to assess the risk of preterm birth in women with a history of spontaneous preterm birth and to differentiate those at higher and lower risk of preterm delivery. The gestational age of a prior preterm birth affects the cervical length in a future pregnancy. (II-2)

Transvaginal Sonographic Cervical Length Assessment in Other Asymptomatic Women at High Risk

Summary Statement

Cervical length measurement can be used to identify increased risk of preterm birth in asymptomatic women at <24 weeks who have other risk factors for preterm birth (previous excisional treatment for cervical dysplasia, uterine anomaly, or prior multiple dilatation and evacuation procedures beyond 13 weeks' gestation). However, there is insufficient evidence to recommend specific management strategies, such as cerclage, in these women. (II-2)

Diagnosis of Short Cervix Beyond 24 Weeks' Gestation in Asymptomatic Women at High Risk

Summary Statement

No specific randomized trials have evaluated any interventions in asymptomatic women at >24 weeks' gestation who are at increased risk of preterm birth (e.g., those who have a history of prior spontaneous preterm birth, previous excisional treatment for cervical dysplasia, uterine anomaly, or prior multiple dilatation and evacuation procedures beyond 13 weeks' gestation) and who have a short cervical length. This information may help with empiric management of these women, including reduction of activity level, work, or travel, relocation, increased surveillance, and administration of corticosteroids. (III)

Ultrasonographic Cervical Length Assessment in Clinical Management

Use of Transvaginal Ultrasound to Stratify Women Presenting with Preterm Labour

Recommendation

5. In women presenting with suspected preterm labour, transvaginal sonographic assessment of cervical length may be used to help in determining who is at high risk of preterm delivery and may be helpful in preventing unnecessary intervention. It is unclear whether this information results in a reduced risk of preterm birth. (II-2B)

Ultrasonographic Cervical Assessment in Women with Suspected Preterm Premature Rupture of Membranes

Summary Statement

Transvaginal ultrasound appears to be safe in preterm premature rupture of membranes, but its clinical predictive value is uncertain in this context. (II-2)

Ultrasonographic Cervical Length Assessment and Cervical Cerclage

Recommendations

6. In asymptomatic women with a history of spontaneous preterm birth and an ultrasonographically diagnosed short cervical length (<25 mm) prior to 24 weeks of gestation, cervical cerclage should be considered to reduce the risk of preterm birth. (I-B)
7. In all asymptomatic women who present with membranes at or protruding past the external cervical os, an emergency cerclage should be considered to reduce the risk of preterm delivery. (I-B)

Ultrasonographic Cervical Length Assessment after Cervical Cerclage Placement

Summary Statement

It is unclear whether ultrasonographic cervical length assessment has significant advantages over clinical examination alone after elective or emergency cervical cerclage placement, although some signs, such as funnelling to the stitch, are associated with a high risk of preterm premature rupture of membranes. There is no consensus on the frequency or timing of ultrasonographic cervical length assessment post cerclage. (II-2)

Serial Ultrasonographic Cervical Length Assessment Compared with Clinical Assessment of Need for Elective Cerclage Placement

Summary Statement

It is unclear whether a policy of cervical length surveillance is equivalent to clinical assessment of the need for elective cerclage in those at risk of preterm delivery. (I)

Ultrasonographic Cervical Length Combined with Fetal Fibronectin in the Prediction of Preterm Birth

Summary Statement

Ultrasonographic cervical length assessment and fetal fibronectin appear to be similar in predictive ability, and the combination of both in a high-risk population may be of value. However, further research is needed in this area. (II-2)

Definitions:

Quality of Evidence Assessment*

I: Evidence obtained from at least one properly randomized controlled trial.

II-1: Evidence from well-designed controlled trials without randomization.

II-2: Evidence from well-designed cohort (prospective or retrospective) or case-control studies, preferably from more than one centre or research group.

II-3: Evidence obtained from comparisons between times or places with or without the intervention. Dramatic results in uncontrolled experiments (such as the results of treatment with penicillin in the 1940s) could also be included in this category.

III: Opinions of respected authorities, based on clinical experience, descriptive studies, or reports of expert committees.

*Adapted from the Evaluation of Evidence criteria described in the Canadian Task Force on Preventive Health Care.

Classification of Recommendations†

A. There is good evidence to recommend the clinical preventive action.

B. There is fair evidence to recommend the clinical preventive action.

C. The existing evidence is conflicting and does not allow to make a recommendation for or against use of the clinical preventive action; however, other factors may influence decision-making.

D. There is fair evidence to recommend against the clinical preventive action.

E. There is good evidence to recommend against the clinical preventive action.

L. There is insufficient evidence (in quantity or quality) to make a recommendation; however, other factors may influence decision-making.

†Adapted from the Classification of Recommendations criteria described in the Canadian Task Force on Preventive Health Care.

Clinical Algorithm(s)

None provided

Scope

Disease/Condition(s)

- Preterm birth
- Short cervical length

Guideline Category

Assessment of Therapeutic Effectiveness

Diagnosis

Evaluation

Management

Prevention

Risk Assessment

Screening

Treatment

Clinical Specialty

Family Practice

Internal Medicine

Obstetrics and Gynecology

Preventive Medicine

Radiology

Intended Users

Advanced Practice Nurses

Physicians

Guideline Objective(s)

- To review the use of ultrasonographic-derived cervical length measurement in predicting preterm birth
- To review interventions associated with a short cervical length

Target Population

Pregnant women who are at risk for spontaneous preterm birth or who present with suspected preterm labour

Interventions and Practices Considered

Diagnosis/Evaluation/Risk Assessment

1. Transvaginal ultrasonography for cervical length assessment
2. Transperineal ultrasonography for cervical length assessment in selected cases
3. Transabdominal ultrasonography for cervical length assessment (considered but not recommended)
4. Fetal fibronectin measurement
5. Clinical examination

Management/Treatment

1. Cervical cerclage
2. Progesterone supplementation (considered but not recommended)

Major Outcomes Considered

- Sensitivity, specificity, and predictive value of ultrasonographic assessments
- Risk of preterm birth
- Rate of preterm birth

Methodology

Methods Used to Collect/Select the Evidence

Hand-searches of Published Literature (Primary Sources)

Searches of Electronic Databases

Searches of Unpublished Data

Description of Methods Used to Collect/Select the Evidence

Published literature was retrieved through searches of PubMed and The Cochrane Library up to December 2009, using appropriate controlled vocabulary and key words (preterm labour, ultrasound, cervix, incompetent cervix, transvaginal, transperineal, cervical length, fibronectin). Results were restricted to general and systematic reviews, randomized controlled trials (RCTs)/controlled clinical trials, and observational studies. There were no date or language restrictions. Grey (unpublished) literature was identified through searching the websites of health technology assessment and health technology assessment-related agencies, clinical practice guideline collections, clinical trial registries, and national and international medical specialty societies.

Number of Source Documents

Not stated

Methods Used to Assess the Quality and Strength of the Evidence

Weighting According to a Rating Scheme (Scheme Given)

Rating Scheme for the Strength of the Evidence

Quality of Evidence Assessment*

I: Evidence obtained from at least one properly randomized controlled trial.

II-1: Evidence from well-designed controlled trials without randomization.

II-2: Evidence from well-designed cohort (prospective or retrospective) or case-control studies, preferably from more than one centre or research group.

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Methods Used to Analyze the Evidence

Review of Published Meta-Analyses

Systematic Review

Description of the Methods Used to Analyze the Evidence

Not stated

Methods Used to Formulate the Recommendations

Expert Consensus

Description of Methods Used to Formulate the Recommendations

Not stated

Rating Scheme for the Strength of the Recommendations

Classification of Recommendations†

A. There is good evidence to recommend the clinical preventive action.

B. There is fair evidence to recommend the clinical preventive action.

C. The existing evidence is conflicting and does not allow to make a recommendation for or against use of the clinical preventive action; however, other factors may influence decision-making.

D. There is fair evidence to recommend against the clinical preventive action.

E. There is good evidence to recommend against the clinical preventive action.

L. There is insufficient evidence (in quantity or quality) to make a recommendation; however, other factors may influence decision-making.

†Adapted from the Classification of Recommendations criteria described in the Canadian Task Force on Preventive Health Care.

Cost Analysis

A formal cost analysis was not performed and published analyses were not reviewed.

Method of Guideline Validation

Description of Method of Guideline Validation

This clinical practice guideline has been prepared by the Diagnostic Imaging Committee, reviewed by the Family Physicians Advisory Committee and the Maternal Fetal Medicine Committee, and approved by the Executive and Council of the Society of Obstetricians and Gynaecologists of Canada.

Evidence Supporting the Recommendations

Type of Evidence Supporting the Recommendations

The type of supporting evidence is identified and graded for each recommendation (see the "Major Recommendations" field).

Benefits/Harms of Implementing the Guideline Recommendations

Potential Benefits

- Preterm birth is a leading cause of perinatal morbidity and mortality. Use of the ultrasonographic technique reviewed in this guideline may help identify women at risk of preterm birth and, in some circumstances, lead to interventions that may reduce the rate of preterm birth.
- A long cervix (at least 25 to 30 mm), as assessed by transvaginal sonography, is reassuring and can help to reduce unnecessary and costly interventions, such as activity restriction, maternal transfer, steroids, and tocolytics.

Potential Harms

Not stated

Qualifying Statements

Qualifying Statements

These guidelines reflect emerging clinical and scientific advances as of the date issued and are subject to change. The information should not be construed as dictating an exclusive course of treatment or procedure to be followed. Local institutions can dictate amendments to these opinions. They should be well documented if modified at the local level. None of the contents may be reproduced in any form without prior written permission of the Society of Obstetricians and Gynaecologists of Canada (SOGC).

Implementation of the Guideline

Description of Implementation Strategy

An implementation strategy was not provided.

Implementation Tools

Foreign Language Translations

Institute of Medicine (IOM) National Healthcare Quality Report Categories

IOM Care Need

Getting Better

Living with Illness

Staying Healthy

IOM Domain

Effectiveness

Identifying Information and Availability

Bibliographic Source(s)

Lim K, Butt K, Crane JM. Ultrasonographic cervical length assessment in predicting preterm birth in singleton pregnancies. *J Obstet Gynaecol Can.* 2011 May;33(5):486-99. [141 references] [PubMed](#)

Adaptation

Not applicable: The guideline was not adapted from another source.

Date Released

2011 May

Guideline Developer(s)

Society of Obstetricians and Gynaecologists of Canada - Medical Specialty Society

Source(s) of Funding

Society of Obstetricians and Gynaecologists of Canada

Guideline Committee

Diagnostic Imaging Committee

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Financial Disclosures/Conflicts of Interest

Disclosure statements have been received from all members of the committees.

Guideline Status

This is the current release of the guideline.

Guideline Availability

Electronic copies: Available in Portable Document Format (PDF) from the [Society of Obstetricians and Gynaecologists of Canada Web site](#)

Print copies: Available from the Society of Obstetricians and Gynaecologists of Canada, La société des obstétriciens et gynécologues du Canada (SOGC) 780 promenade Echo Drive Ottawa, ON K1S 5R7 (Canada); Phone: 1-800-561-2416.

Availability of Companion Documents

A French language version of the original guideline document is available in Portable Document Format (PDF) from the [Society of Obstetricians and Gynaecologists of Canada Web site](#) .

Patient Resources

None available

NGC Status

The NCG summary was completed by ECRI Institute on September 29, 2011. The information was verified by the guideline developer on November 2, 2011.

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